

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mark James Yunker)
Serial No.: 09/904,387) Group Art Unit: 3653
Filed: 07/12/2001) Examiner: Daniel K. Schlak
For: Slide For Sorting Machine)

December 16, 2002

Commissioner for Patents and Trademarks
Washington, D.C. 20231

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RESPONSE TO OFFICE ACTION

This paper is submitted in response to the Office Action mailed on 10/09/02 ("the Office Action").

I. Amendments

Please amend the application as follows:

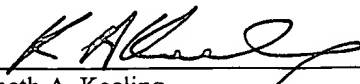
In The Drawings

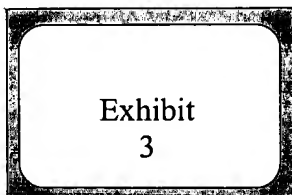
The applicant offers one (1) sheet of substitute drawings to include designations of --Prior Art-- on Figs. 1 and 2. Figs. 3 and 4 each depict a representative product guide 50. Product guide 50 is an aspect of the present invention, so marking of Figs. 3 and 4 as Prior Art has been deferred pending action on this response.

CERTIFICATION UNDER 37 C.F.R. 1.8(a)

I hereby certify that on the date shown below, this correspondence is being transmitted via facsimile to
(703) 306-4195. 308.2177

12/25/02
Date


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In The Claims

What is claimed is:

1. (amended) A slide for a gravity slide sorter comprising:

an inclined chute having a chute upper end, a bottom and two sides;

a first support bracket and a second support bracket, said first support bracket and said second support bracket each mounted to a side of the chute, each of said first and second support brackets having an upper edge distal said chute bottom;

each of said first and second support brackets having at least one alignment notch located on its upper edge;

a product guide supported by said support brackets;

said product guide having a guide upper end and two guide sides;

said product guide having at least one guide tab extending from each said guide side;

at least one guide tab receivable in each said at least one alignment notch of said first support bracket;

at least one guide tab receivable in each said at least one alignment notch of said second support bracket;

attachment means attaching said guide upper end to said chute upper end;

said attachment means limiting movement of said product guide laterally in relation to said chute bottom; and

said attachment means allowing relative movement of said product guide normal to said chute bottom.

2. (amended) The slide of claim 1 further including:

each of said first and second support brackets having at least one adjustment mechanism;

each said at least one adjustment mechanism operable to adjust the height of said bracket upper edges in relation to said chute bottom.

3. (amended) The slide of claim 1 wherein said attachment means comprising:

at least one elongated pin extending from said chute; and

at least one pin-receiving opening provided in said product guide.

4. (amended) The slide of claim 2 wherein said attachment means comprising:

at least one elongated pin extending from said chute; and

at least one pin-receiving opening provided in said product guide.

5. (amended) The slide of claim 1 wherein:

the product guide is constructed of a flexible material; and

the product guide flexibly moveable upwardly from the bottom of the chute responsive to forces imparted by a product intermediate the chute and the product guide.

6. (amended) The slide of claim 2 wherein:

the product guide is constructed of a flexible material; and

the product guide flexibly moveable upwardly from the bottom of the chute responsive to forces imparted by a product intermediate the chute and the product guide.

7. (amended) The slide of claim 1 wherein the chute further includes:

a plurality of channel dividers extending upwardly from the channel bottom; and

at least one of said plurality of channel dividers a different height from at least one other said plurality of channel dividers.

8. (amended) The slide of claim 1 wherein:

each said alignment notch defining a notch bottom and two notch edges; and

the notch edge distal said chute upper end comprising a tapered edge such that the notch opening is wider at the bracket upper edge than at the notch bottom.

9. (amended) The slide of claim 2 wherein:

each said alignment notch defining a notch bottom and two notch edges; and

the notch edge distal said chute upper end comprising a tapered edge such that the notch opening is wider at the bracket upper edge than at the notch bottom.

10. The slide of claim 1 wherein the tabs are integral with the product guide.

Please cancel claims 11 and 12.

13. (added) The slide of claim 1 wherein:

said attachment means comprising at least two pins extending from said chute upper end and at least two pin-receiving openings in said product guide.

14. (added) The slide of claim 2 wherein:

each said adjustment mechanism comprises a slotted opening in one of said first and second support mechanisms and a corresponding screw and threaded opening in a corresponding said chute side.

15. (added) A gravity-fed sorting machine comprising:

a hopper for retaining product to be sorted;

a slide;

said slide oriented at an acute slide angle in relation to a horizontal direction;

a feeder for distributing products to the slide;

an optical viewing station positioned below the slide;

ejector means for altering a trajectory path of selected products;
a product guide supported on said slide; and
attachment means for attaching said product guide to said channeled slide at a slide upper end.

16. (added) The sorting machine of claim 15 further comprising:

said slide comprising a chute having a chute bottom, chute sides and a chute upper end;
said attachment means allowing movement of said product guide normal to said chute bottom; and
said attachment means limiting lateral movement of said product guide in relation to said chute bottom.

17. (added) The sorting machine of claim 16 further comprising:

a first support bracket and a second support bracket, said first and second support brackets each connected to a chute side;
each of said first and second support brackets having at least one adjustment mechanism;
each of said first and second support brackets having a bracket upper edge distal said chute bottom;
each said at least one adjustment mechanism operable to adjust the height of said bracket upper edges in relation to said chute bottom; and
said product guide supported by said first and second support brackets.

18. (added) The sorting machine of claim 17 further comprising:

each said bracket upper edge having at least one alignment notch;
said product guide having a guide upper end and guide sides;
at least one guide tab extending from each said guide side; and

each said at least one guide tab receivable in a corresponding said alignment notch.

19. (added) The sorting machine of claim 18 further comprising:

said attachment means comprising at least one elongated pin extending from said chute at said chute upper end; and

at least one pin-receiving opening provided in said product guide at said guide upper end.

20. (added) The sorting machine of claim 16 further comprising:

said product guide constructed of a flexible material allowing flexing movement of said product guide in relation to said chute responsive to biasing forces.

21. (added) The sorting machine of claim 16 further comprising:

a plurality of channel dividers extending upwardly from the channel bottom;

at least one of said plurality of channel dividers a different height from at least one other said plurality of channel dividers.

22. (added) The slide of claim 18 wherein:

each said alignment notch defining a notch bottom and two notch edges; and

the notch edge distal said chute upper end comprising a tapered edge such that the notch opening is wider at the bracket upper edge than at the notch bottom.

23. (added) A gravity-fed sorting machine comprising:

a hopper for retaining product to be sorted;

a slide;

said slide oriented at an acute slide angle in relation to a horizontal direction;

a feeder for distributing products to the slide;

an optical viewing station positioned below the slide;

ejector means for altering a trajectory path of selected products;

a product guide supported on said slide;

attachment means for attaching said product guide to said channeled slide at a slide upper end;

said slide comprising a chute having a chute bottom, chute sides and a chute upper end;

said attachment means allowing movement of said product guide normal to said chute bottom;

said attachment means limiting lateral movement of said product guide in relation to said chute bottom;

said product guide supported on said chute sides; and

said product guide spaced from said chute bottom.

24. (added) The sorting machine of claim 23 further comprising:

a plurality of channel dividers extending upwardly from the channel bottom;

at least one of said plurality of channel dividers a different height from at least one other said plurality of channel dividers; and

said product guide spaced from said channel dividers.

25. (added) The sorting machine of claim 24 further comprising:

said attachment means comprising at least one elongated pin extending from said chute at said chute upper end; and

at least one pin-receiving opening provided in said product guide at said guide upper end.

26. (added) The sorting machine of claim 25 further comprising:

said product guide constructed of a flexible material allowing flexing movement of said product guide in relation to said chute responsive to biasing forces.

II. Remarks Concerning the Drawing Amendments

The applicant offers substitute drawings for Figs. 1 and 2 to include designations of --Prior Art--. Figs. 3 and 4 each depict a representative product guide 50. Product guide 50 is an aspect of the present invention, so marking of Figs. 3 and 4 as Prior Art has been deferred pending action on this response.

III. Remarks Concerning the Claim Amendments

Applicant has amended claims 1-9 to particularly point out and distinctly claim subject matter that the applicant regards as his invention. The remaining claims, being dependent on the amended claims, are now also not indefinite.

Claims 11 and 12 have been cancelled.

Claims 1-9 have been amended, and claims 13-26 have been added, to distinguish the subject matter claimed as to the prior art cited by the Examiner.

IV. Response to Examiner's Section 112 Rejections

The applicant has amended the claims to particularly point out and distinctly claim subject matter that the applicant regards as his invention. As such, the claims are no longer indefinite.

V. Response to Examiner's Section 102 Rejections

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131. The applicant respectfully argues that *Haaser* does not teach every element of the amended claims, either expressly or inherently.

Haaser teaches a product guide (51) connected to the sidewalls of the chute (21) in a rigid manner, employing securing blocks (31), hook catches (75) and clamps (41). This configuration does not provide for product attachment means that limit lateral movement of the product guide in relation to the chute while allowing movement of the product guide in relation to the chute as now claimed in amended claim 1.

Haaser's teaches locking mechanisms joining the product guide (51) and the sidewalls of the chute (21) to prevent vibratory damage. *Haaser* accordingly teaches away from the present invention. *Haaser* teaches the specific requirement of "a hinged top section with *zero lash* in the hinge in the closed position of the top section." Col. 1, lines 41-44 (emphasis added). Any loose connection will quickly cause impact damage and effective destruction. *See* Col. 1, lines 27 and 28. To modify the *Haaser* device to remove the means of producing "no lash," as is required by the current invention, would defeat the purpose of the teaching.

Further, prior art, for purposes of obviousness, does not include disclosures in non-analogous fields of art. *In re Woods*, 599 F.2d 1032, 1036. The test as to whether two references are from non-analogous arts is whether one seeking to solve a problem with respect to the embodiment of a reference in one art would be apt to seek the solution to said problem in the other art. *See In re Shapleigh*, 248 F.2d 96, 102. While a vibratory chute may indeed be inclined, a vibratory chute is used for different purposes than a gravity-fed channeled slide used to maintain alignment of a free-flowing product. A vibratory slide would not provide the smooth steady flow sought in a slide for an optical scanner. Such being the case, a person having ordinary skill in the field of gravity-feed slides would not be apt to seek a solution to organizing product in the field of vibration slides – the antithesis of their field. Therefore, for the problems addressed by the current invention, vibratory slides would be non-analogous art.

The applicant has reviewed the prior art and contends the prior art references do not suggest or motivate one to modify the references or combine the reference teachings, or teach or suggest all the limitations of the current invention.

VI. Conclusion

The applicant has offered substitute drawings and amended the claims responsive to the subject Office Action. Applicant respectfully submits that the claims as amended should be allowable over the prior art. Applicant requests that the claims be allowed as amended.

Respectfully submitted,



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enclosure: Amendments (Marked Up Version)
Substitute Drawings (1 sheet)
Substitute Drawings (Marked Up Version)

AMENDMENTS (Marked Up Version)

What is claimed is:

1. (amended) A slide for a gravity slide sorter comprising:

an inclined chute having a chute upper end, a bottom and two sides;

a first support bracket and a second support bracket[s respectively], said first support bracket and said second support bracket each mounted to [the two]a side[s] of the chute, each of said first and second support brackets having an upper edge distal said chute bottom;

each of said first and second support brackets having at least one alignment notch located on its upper edge;

a product guide [movably mounted]supported above said support brackets[the chute and having one or more perimeter tabs located along its periphery to support the product guide within the one or more respective notches];

said product guide having a guide upper end and two guide sides;

said product guide having at least one guide tab extending from each said guide side;

at least one guide tab receivable in each said at least one alignment notch of said first support bracket;

at least one guide tab receivable in each said at least one alignment notch of said second support bracket;

attachment means attaching said guide upper end to said chute upper end;

said attachment means limiting movement of said product guide laterally in relation to said chute bottom; and

said attachment means allowing relative movement of said product guide normal to said chute bottom[whereby the product guide moves upwardly from the bottom of the chute with

oversized products moving along the chute and being restored into position by the tabs moving downwardly into the respective notches].

2. (amended) The slide of claim 1 further including:

each of said first and second support brackets having at least one adjustment mechanism;
each said at least one adjustment mechanism operable to adjust the height of said bracket
upper edges in relation to said chute bottom[for each of the brackets with respect to the
respective sides of the chute].

3. (amended) The slide of claim 1 [further including]wherein said attachment means

comprising:
at least one elongated pin extending from said chute; and
at least one pin-receiving opening provided in said product guide[to allow the product
guide to move upwardly from the bottom of the chute].

4. (amended) The slide of claim 2 [further including]wherein said attachment means

comprising:
at least one elongated pin extending from said chute; and
at least one pin-receiving opening provided in said product guide[to allow the product
guide to move upwardly from the bottom of the chute].

5. (amended) The slide of claim 1 wherein:

the product guide is constructed of a flexible material; and[dimensionally elongated along at least a portion of the chute in the direction of product movement,]

the product guide flexibly [moving]moveable upwardly from the bottom of the chute [with oversized]responsive to forces imparted by a product[s moving along] intermediate the chute and the product guide.

6. (amended) The slide of claim 2 wherein:

the product guide is constructed of a flexible material; and[dimensionally elongated along at least a portion of the chute in the direction of product movement,]

the product guide flexibly moveable[moving] upwardly from the bottom of the chute [with oversized]responsive to forces imparted by a product[s moving along] intermediate the chute and the product guide.

7. (amended) The slide of claim 1 wherein the chute further includes:

[different height]a plurality of channel dividers extending upwardly from the channel bottom; and

at least one of said plurality of channel dividers a different height from at least one other said plurality of channel dividers[, at least some of which are of sufficient height to contact the product guide when the tabs are resting in the bottom of the respective notches].

8. (amended) The slide of claim 1 wherein:

each said alignment[of the] notch[es has] defining a notch bottom and two notch edges;
and
the notch edge distal said chute upper end comprising a tapered edge such that the notch opening is wider at the bracket upper edge than at the notch bottom[downstream side to assist in the alignment therein of the respective tabs].

9. (amended) The slide of claim 2 wherein:

each said alignment[of the] notch[es has] defining a notch bottom and two notch edges;
and
the notch edge distal said chute upper end comprising a tapered edge such that the notch opening is wider at the bracket upper edge than at the notch bottom[downstream side to assist in the alignment therein of the respective tabs].

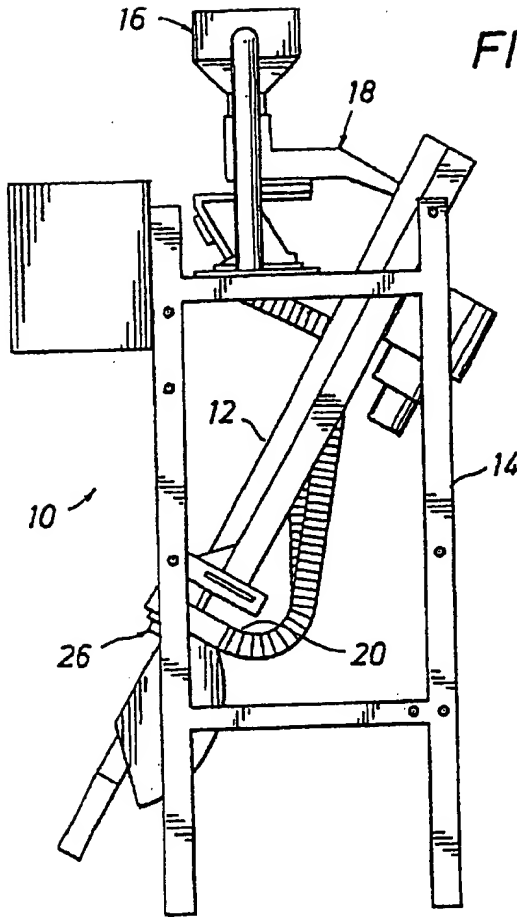
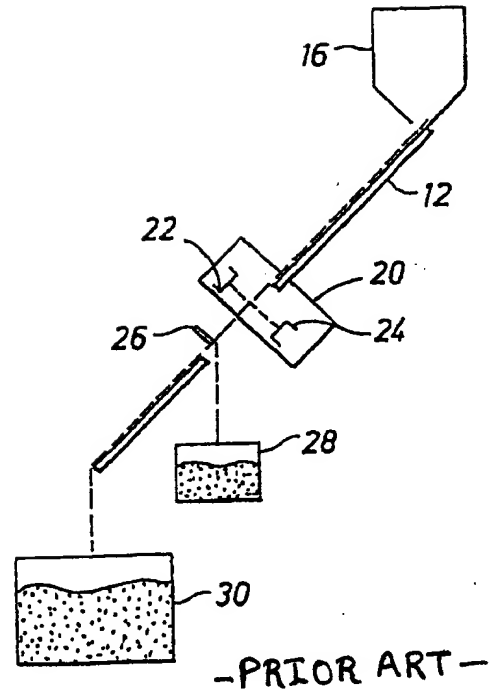


FIG. 1

FIG. 2



-PRIOR ART-

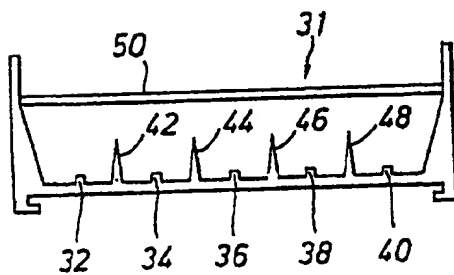


FIG. 3

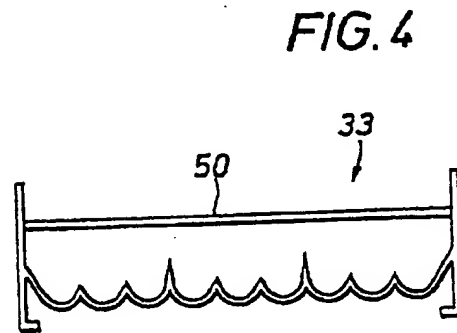


FIG. 4

